

# 2B

SECTION

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## **Assessing payment adequacy and updating payments for physician services**

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## R E C O M M E N D A T I O N

The Congress should update payments for physician services by the projected change in input prices, less an adjustment for productivity growth of 0.9 percent, for 2004.

**\*YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1**

**\*COMMISSIONERS' VOTING RESULTS**

# SECTION 2B

## Section 2B: Assessing payment adequacy and updating payments for physician services

Medicare payment rates for physician services are based on a fee schedule and are updated annually with the so-called sustainable growth rate system, which ties updates to growth in the national economy. Under this system, the update for 2003 is a reduction of 4.4 percent. If the Congress changes current law and increases payment rates modestly for 2003, current rates would be adequate. MedPAC would then recommend an update for 2004 that equals the estimated change in input prices less an adjustment for productivity growth. If the Congress does not increase rates for 2003, a higher update would be necessary in 2004 to offset the rate reduction in 2003.

### In this section

- Assessing payment adequacy
- Accounting for cost changes in the coming year
- Update recommendation

In this section, we assess the adequacy of Medicare's current payments for physician services. We then recommend a payment update for 2004 that considers the adequacy of current payments and changes in cost for the coming year.

Recommending a payment update for 2004 is complicated by the uncertainty of the update for 2003. Under current law, the update for 2003 is a reduction of 4.4 percent. This would follow a 5.4 percent reduction in payment rates that occurred in 2002.<sup>1</sup> A bill passed by the House last summer would have reversed this reduction and required a positive update of 2.0 percent. More recently, the Senate passed an omnibus spending bill for fiscal year 2003 that included a freeze of physician payment rates through September 30 of this year. MedPAC still believes a modest positive update for 2003 is appropriate, as recommended in our March 2002 Report to the Congress: Medicare Payment Policy.

In 2001, total payments (program spending and beneficiary cost sharing) for physician services totaled \$55.9 billion. These payments have been increasing at an average annual rate of 4.9 percent, since 1991, due to changes in the number of beneficiaries, use of services per beneficiary, and payment rates. Program spending for physician services is projected to grow at an average annual rate of 2 to 4 percent from 2001 to 2006.<sup>2</sup> This growth is projected to occur despite a series of negative updates during this period (Figure 2B-1). That is, despite negative updates in payment rates, the volume of services is projected to increase

at a rate sufficient to result in positive rates of growth in spending.

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## Assessing payment adequacy

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Some indicators of payment adequacy, such as entry and exit of providers, suggest that Medicare's payments for physician services were at least adequate through 2002. Other information presents more of a mixed picture of payment adequacy. In 2002, physicians were somewhat less willing to accept new Medicare patients than they were in 1999. In addition, Medicare's payment rates fell farther below private sector rates when Medicare rates were reduced in 2002. Whether the difference between Medicare and private sector payment rates has grown enough to become a problem is not clear because the difference in 2002 was about the same as it was in 1999.

Taken together, these indicators suggest that payments were adequate in 2002. For 2003, payments should remain adequate as long as the Congress changes current law to prevent the 4.4 percent payment reduction from taking effect. If the Congress does not change current law, however, then payments may not be adequate in 2003 and a compensating adjustment in payments would be necessary in 2004.

## Entry and exit of providers

Provider entry and exit is one indicator of the adequacy of the current level of payments. Rapid growth in the number of

providers furnishing services to Medicare beneficiaries may indicate that the program's payment rates are too high. Conversely, widespread provider withdrawals could suggest that the rates are too low.

For physician services, there are two indicators of provider entry and exit. One indicator is the number of physicians billing Medicare. The other more commonly used indicator is the participation rate. The participation rate is the percentage of physicians who have signed a participation agreement that commits them to "accept assignment" on all their Medicare billings for one year.<sup>3</sup> Both indicators can provide evidence that payments were adequate. Data on the number of physicians billing Medicare are available through 2001, and the participation rate is available for 2002. The participation rate, as an indicator of payment adequacy, requires some qualification, however, for reasons discussed below.

## Physicians billing Medicare

Counts of physicians billing Medicare show that the number of physicians furnishing services to beneficiaries has more than kept pace with growth in the number of beneficiaries (Table 2B-1).<sup>4</sup> From 1995 to 2001, the number of physicians billing traditional Medicare grew by 8.1 percent, but Medicare Part B enrollment grew by only 5.7 percent. This difference in growth rates led to an increase in the number of physicians per 1,000 beneficiaries, from 12.9 to 13.2. The difference also suggests that payment rates were not too low in 2001.

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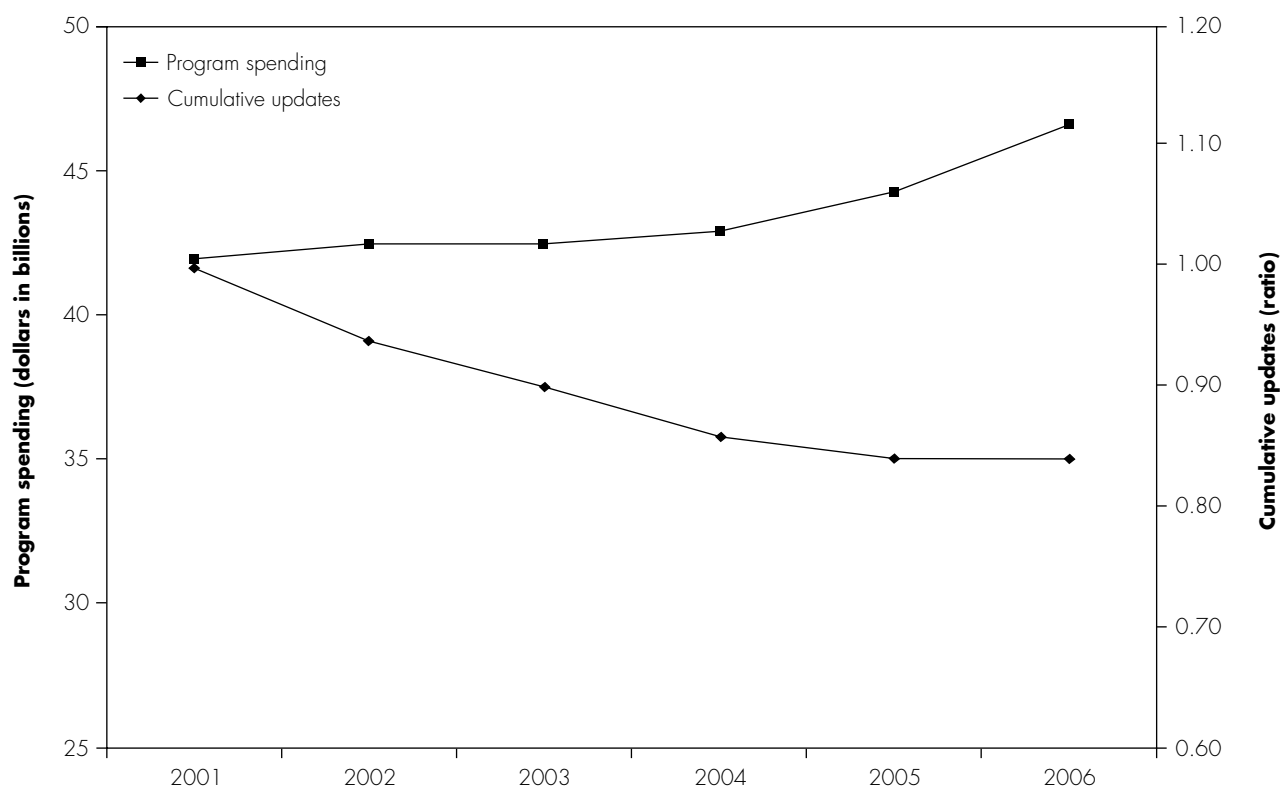
1 Both reductions—the 4.4 percent reduction in 2003 and the 5.4 percent reduction in 2002—apply to the fee schedule's conversion factor, which translates the fee schedule's relative weights into dollar payment amounts. The reductions include payment updates under the sustainable growth rate system, legislative adjustments, and budget neutrality adjustments (CMS 2001 and CMS 2002).

2 The 2 percent growth rate is based on projections in the 2002 annual report of the Boards of Trustees of the Medicare trust funds. The 4 percent growth rate is based on projections in the March 2002 baseline from the Congressional Budget Office.

3 Accepting assignment means that physicians accept the payment rates in the physician fee schedule as payment in full with no further billing of beneficiaries for amounts above those rates. Under assignment, the physician receives the program payment, which is 80 percent of the total payment amount, directly from Medicare. The beneficiary is responsible for the other 20 percent. Without assignment, the beneficiary receives the program payment, and the physician bills the beneficiary for the total.

4 The counts of physicians billing Medicare are affected by multiple physicians (e.g., those in the same practice) using the same billing number. The extent of this problem is unknown. To the extent it occurs, however, it means that the counts reported here are an understatement of the number of physicians billing Medicare. In addition, there are indications that the problem of multiple physicians using the same billing number is increasing over time. This means that the growth rate reported for the number of physicians billing Medicare may be understated also.

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**FIGURE  
2B-1****Physician services program spending and payment updates, 2001–2006**

Source: 2002 annual report of the Boards of Trustees of the Medicare trust funds.

**Physicians signing participation agreements**

The other indicator of entry and exit—the participation rate—is a leading, or anticipatory, indicator. At the beginning of the calendar year, physicians establish a new agreement, if one is not already in effect, or they cancel existing agreements. This occurs after CMS determines Medicare’s payment rates for physician services for the coming year. Thus, physicians decide in advance whether to participate, based on the level of the rates and other factors they deem relevant.

Participation rates have been rising steadily (Figure 2B-2, p. 74). The rate was 80.2 percent in 1997, and it rose to 89.7 percent in 2002.<sup>5</sup> This trend may end, however, if there is another payment

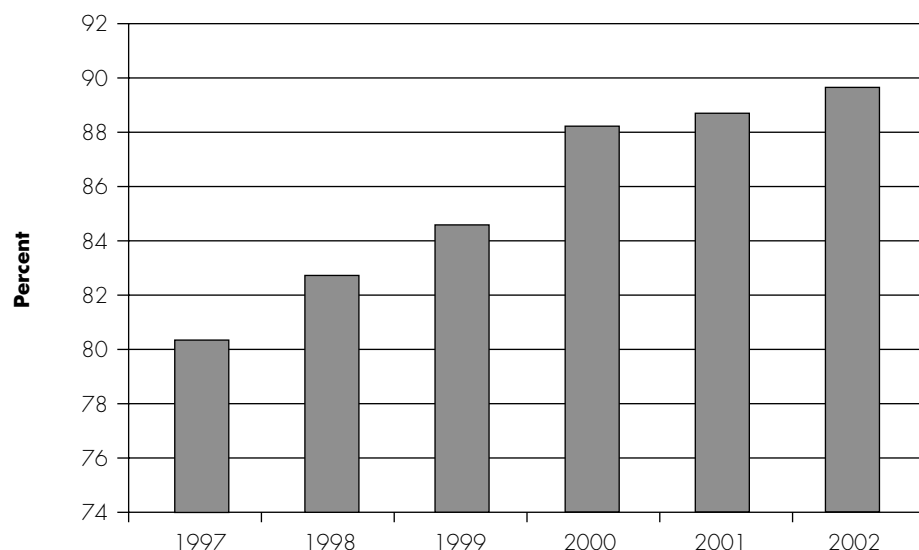
**TABLE  
2B-1****Physicians billing traditional Medicare, 1995–2001**

Year	Number of physicians	Part B enrollment (millions)	Number of physicians per 1,000 beneficiaries
1995	460,700	35.641	12.9
1996	469,915	36.104	13.0
1997	476,164	36.445	13.1
1998	478,123	36.756	13.0
1999	484,576	37.022	13.1
2000	491,547	37.315	13.2
2001	498,232	37.657	13.2

Note: The numerator of the ratio of physicians per 1,000 beneficiaries includes allopathic and osteopathic physicians and excludes nurse practitioners, physician assistants, psychologists, and other nonphysician health professionals. The denominator is the number of beneficiaries enrolled in Medicare Part B, including traditional Medicare and Medicare+Choice, on the assumption that physicians are providing services to both types of beneficiaries.

Source: Unpublished CMS data.

<sup>5</sup> There has been a delay in the availability of information on the participation rate for 2003. Preliminary information is usually available early in the calendar year, following CMS’s distribution of enrollment materials in November. For 2003, distribution of these materials did not occur until early January because of a delay in determining this year’s payment rates.

**FIGURE  
2B-2****Physician participation rates, 1997–2002**

Source: Unpublished CMS data.

reduction. According to an online survey conducted by the American Medical Association (AMA), 42 percent of physicians said they would not sign or continue a participation agreement with Medicare for 2003 if there is an additional payment cut (AMA 2002).<sup>6</sup>

Regardless of what happens in 2003, for two reasons the participation rate, as an indicator of payment adequacy, requires qualification.

First, physicians have strong incentives to sign a participation agreement. These incentives make the participation rate less sensitive than some other indicators of payment adequacy. This is particularly true for physician specialties that are heavily dependent on Medicare for revenue, such as ophthalmology and cardiology.

One incentive for physicians to sign a participation agreement is that their names

appear in a directory that is available to beneficiaries. The other—stronger—incentive is that, for those who sign an agreement, the allowed charge for a service is 100 percent of the fee schedule payment rate. For physicians who do not sign an agreement, the allowed charge for a service is only 95 percent of the fee schedule rate. Nonparticipating physicians can charge the beneficiary an additional amount, above the standard 20 percent copayment, but only if they choose not to accept assignment and forego direct payment from Medicare. Also, the amount of this so-called balance billing is limited by statute. The total charge for a service cannot exceed 115 percent of the allowed charge, or 109.25 percent (115 percent of 95 percent) of the fee schedule payment rate.

The second reason the participation rate requires qualification is that it includes physicians who are no longer billing

Medicare. This introduces a subtle bias in the rate (see text box). It also reduces the value of the rate as an indicator of beneficiary financial liability.

To better understand the relationship between participation and beneficiary financial liability, it is necessary to analyze claims data and calculate the percentage of allowed charges that are attributable to participating physicians. When such analysis is done, it shows that almost all charges are submitted by physicians who have signed a participation agreement. For instance, based on claims data from the first 6 months of 2002, about 96 percent of allowed charges for physician services were for services furnished by participating physicians.<sup>7</sup>

**Beneficiaries' access to care**

Payment adequacy can also be evaluated by assessing beneficiaries' access to care. Widespread access problems for beneficiaries may indicate that Medicare's payment rates are too low. However, access measures may be difficult to interpret because they are influenced by many factors. Access to care for specific services, for example, may be affected by beneficiaries' incomes, supplemental insurance coverage, preferences, or transportation barriers, all of which are unrelated to Medicare's payment policies.

**Physician willingness and ability to serve beneficiaries**

Findings from a 2002 survey of physicians, sponsored by MedPAC and conducted by Project HOPE and The Gallup Organization (Schoenman and Feldman 2002), present a mixed picture.<sup>8</sup>

- Of physicians accepting some new patients, 96 percent reported that they were accepting at least some new Medicare patients. This percentage was higher than for physicians

<sup>6</sup> The results of this survey are based on responses from 520 physicians and a response rate of 26 percent.

<sup>7</sup> Another 3 percent of allowed charges were for services furnished by nonparticipating physicians who accepted assignment. Only 1 percent of allowed charges were for services furnished by nonparticipating physicians who did not accept assignment.

<sup>8</sup> The survey was fielded from April through August 2002. About 800 physicians participated, representing a response rate of 54.5 percent.

## Interpreting the participation rate

**B**ias in the participation rate arises because the numerator of the rate is more accurate than its denominator. The numerator is the number of physicians who have signed a participation agreement, and the denominator is a total number of physicians who may bill Medicare during the coming year. Both numbers are based on lists of physicians maintained by the contractors that process the claims for payment that physicians submit to Medicare.

Because physicians have no reason to contact Medicare to say whether they are still billing the program, the denominator changes only when the contractors review their lists of physicians and drop those who are no longer active. The numerator—the number of physicians who have signed a participation agreement—can change in two ways: Physicians can establish an agreement or cancel an existing one, or the contractors can review their lists of physicians, as above. Because the numerator is less likely than the denominator to be inflated by inactive physicians, a bias in the participation rate occurs.

This bias introduces uncertainty into interpreting the participation rate as an indicator of payment adequacy. For example, the rate may fall because of a drop in the number of physicians who have a participation agreement with Medicare, which would indicate provider exit and, perhaps, inadequate payments. On the other hand, the participation rate may fall because the contractors' lists of physicians have not been reviewed recently, which would not indicate provider exit or inadequate payments.

The only way to avoid the problem of bias in the participation rate is to, instead, use the percentage of allowed charges attributable to participating physicians, or a measure such as the assignment rate (the percentage of allowed charges paid on assignment). The disadvantage of these measures, however, is that they cannot be calculated until claims data become available. (Claims data for the first six months of the year are usually not available until December.) ■

accepting new Medicaid or private health maintenance organization (HMO) patients.

However, there are some signs that physician willingness to accept Medicare patients is declining.

- The percentage of physicians accepting all new Medicare fee-for-service patients dropped from 76 percent in 1999 to 70 percent in 2002. The percentage of physicians accepting only some new Medicare

fee-for-service patients rose from 20 percent in 1999 to 26 percent in 2002.

- Physicians reported that it was more difficult to find appropriate referrals for their Medicare fee-for-service patients than for their private fee-for-service or preferred provider organization (PPO) patients. Conversely, Medicare patients were easier to refer than private HMO or Medicaid patients.

Many doctors participating in MedPAC's survey expressed concerns about payment levels, but physicians were also concerned

about the administrative burdens imposed by Medicare. About 77 percent said that they were concerned about reimbursement levels for their Medicare fee-for-service patients, although only 15 percent of them said that this concern had led them to limit acceptance of new Medicare patients. About 75 percent of physicians reported that they were concerned about billing paperwork and administration, and 16 percent of them said these factors led them to limit their acceptance of new Medicare patients.

Finally, many physicians who responded to MedPAC's survey reported taking steps to reduce their practice costs.

- Two-thirds of physicians said that their practices had delayed or reduced capital expenditures.
- More than one-third of physicians reported that their practices had increased the number of nonphysician clinical staff, and more than half had increased billing and administrative staff.
- Three-quarters of physicians said that they had increased the number of patients seen in an effort to increase revenues.<sup>9</sup>

The relationship between changes in physician practices and Medicare payment policy is unclear. With time spent furnishing services to Medicare beneficiaries as a measure of the importance of Medicare to a physician's practice, the survey data show no consistent relationship between dependence on Medicare and reductions in staff costs or capital expenditures. More importantly, such practice changes may not indicate that payments were too low. Instead, physicians could have been making their practices more efficient in response to forces in the marketplace, such as lower private sector payment rates. Research on patient outcomes is necessary before policymakers can reach conclusions about whether access to high-quality care has diminished.

9 When asked about increasing the number of patients seen, physicians were not asked to distinguish between Medicare and non-Medicare patients.

## Private payer reimbursement for physician services

In addition to sponsoring the survey of physicians, MedPAC contracted with two research firms, Direct Research, LLC, and Dyckman and Associates, LLC, to assess the difference between Medicare and private-payer reimbursement for physician services. If Medicare's payment rates fall relative to the rates of other payers, some physicians may have the ability to stop accepting Medicare patients and instead focus their practices on other patients.

To assess the difference between Medicare and private rates, Direct Research used claims data and other information to estimate average private payment rates for physician services for 1999 to 2001, and to compare those rates with Medicare's (Hogan 2002). To provide information on the actions of private plans after Medicare's rates were reduced in 2002, Dyckman and Associates interviewed private health plan executives and collected survey data from the plans on their physician payment methods and their changes in payment rates from 2001 to 2002 (Dyckman and Hess 2002).

The key findings are:

- The difference between Medicare and average private rates is smaller now than it was in the mid-1990s, primarily because of shifts in private plan enrollment from higher-paying indemnity plans to lower-paying PPOs and HMOs. Medicare's rates were about 66 percent of private rates in 1994, but this percentage rose to about 83 percent in 2001.
- During the recent period of volatility in Medicare's payment updates, the difference between Medicare and private rates narrowed. In 2000 and 2001, Medicare's updates for physician services exceeded inflation. Since 2001, the difference has started to widen again because the shift in

private sector enrollment to HMOs has stopped and because private payers generally did not reduce rates in 2002. Still, in 2002, Medicare rates were about 77 to 79 percent of private rates, which appears to be no lower than in 1999 and above the percentage in 1994.

- Private plans report that Medicare reductions in payment rates have increased pressure on them to raise their rates. None of the plans, however, say that the reductions have had a strong or direct impact on their decisions about payment rates for 2002 or 2003. Some plans indicate that the reductions have had a moderate impact on their decisions.

## Additional access measures

National indicators of access are important because they allow a general assessment of access and inform decisions about payment updates that change the overall level of payments. A limitation of these indicators, however, is that they do not reveal access problems that may exist locally or with regard to specific services. Such problems, if they exist, are important because they may signal a need to alter the distribution of payments among geographic areas, services, or providers.<sup>10</sup>

We can obtain some insight on the local picture through the work of the Center for Studying Health System Change (HSC). For example, in a survey of physicians conducted in 2001, HSC found that 71 percent of all physicians were willing to take all new Medicare patients, but only 55 percent of physicians in Seattle were willing to take all new beneficiaries.

HSC's latest published results are based on survey data collected before the reduction in Medicare payment rates took effect. HSC is currently fielding a new round of surveys, and MedPAC will continue to monitor the results.

## Changes in the volume of services

Changes in the volume of services can be considered an indirect measure of payment adequacy. Medicare spending for physician services is determined by two factors: the rates physicians are paid for specific services and the number of services performed by physicians for Medicare beneficiaries. The volume of physician services per beneficiary can be expected to rise based on factors such as the demographic profile of beneficiaries, their health status, and changes in treatment patterns for specific conditions. According to MedPAC's payment update framework, if the overall volume of services provided to beneficiaries falls, it may indicate that physicians are providing fewer services to Medicare beneficiaries because Medicare payments to physicians are inadequate. Conversely, large increases in volume growth may indicate that Medicare is overpaying for services. In addition, changes in volume growth for specific services may provide evidence of underpayment or overpayment by Medicare for those services. Because volume growth can be driven by a number of factors, these data must be interpreted cautiously.

In the case of physician services, the need for caution is particularly important because of ambiguities in interpreting data on changes in the volume of services.

- There is some evidence to suggest that volume goes up when payment rates go down, the so-called "volume offset." For instance, actuaries at the Centers for Medicare & Medicaid Services have estimated that payments for increased use of services have offset projected savings from past Medicare payment rate reductions by between 30 percent and 50 percent (Codespote et al. 1998).

<sup>10</sup> MedPAC has discussed the distinction between the overall level of payments and the distribution of payments (MedPAC 1999, p.15).



- It is possible that a volume offset, if it occurs, results in increased volume for services other than those affected by the payment reduction. For example, some services, such as office visits and noninvasive diagnostic procedures, are more discretionary than others and may be more likely to grow in volume than other services if payment rates are reduced.
- In addition, the volume of services per beneficiary varies among geographic areas in ways that appear unrelated to patient outcomes (Wennberg et al. 2002; Welch et al. 1993). These findings raise questions about whether some of the current, or baseline, volume of physician services is necessary and whether a change in volume means that access to needed services has changed.
- Volume could have grown because of technological advances or other factors unrelated to the payment reduction. To conclude that the payment reduction, and not other factors, was the cause of some of the 2001 to 2002 volume growth, it would be necessary to contrast the behavior of physicians who experienced the payment reduction with others who did not. This is not possible, however, because the payment reduction applied to all services and, therefore, to all physicians.

With these qualifications in mind, we analyzed the growth in the volume of physician services, by type of service, using claims data for 1999 to 2002 (Table 2B-2, p. 78). Volume was measured as per capita use of physician services by beneficiaries in traditional Medicare.<sup>11</sup>

The analysis shows that, across all services, the volume growth rate was 4.3 percent for 2001 to 2002.<sup>12</sup> This growth rate is one percentage point higher than the average annual growth for 1999 to 2001, which raises the possibility that physicians offset some of the negative update in 2002 by increasing the volume of services. For two reasons, however, we cannot conclude that such a volume offset occurred:

- Volume growth has been high previously, even in years when payment rates have increased. For instance, the volume growth rate was also 4.3 percent for 1999 to 2000, when the payment update for physician services was a positive 5.4 percent.

When we group services into four major categories—evaluation and management, imaging, procedures, and tests—and look at 2001 to 2002 growth rates for each, we see that evaluation and management had the lowest rate, which was 2.9 percent. Still, this was more than double the growth rate for this category in 1999 to 2001. Among the other services, the growth rate for procedures was nearest the average for all services, at 3.5 percent. The growth rates for imaging and tests were much higher at 9.4 percent and 9.0 percent, respectively.

Relatively high growth rates for imaging services were concentrated in several specific categories, all of which involve technology of one kind or another. For instance, nuclear medicine grew by 13.0 percent, computerized automated tomography (CAT) of parts of the body other than the head grew by 15.3 percent, magnetic resonance imaging (MRI) of parts of the body other than the brain grew by 15.9 percent, and MRI of the brain grew by 14.6 percent. It is noteworthy, however, that none of these technologies are new. Instead, it appears that use of well-established technologies is increasing. CAT, for example, was introduced in the 1970s. MRI began to diffuse as a new technology in the 1980s. Thus, the indications for use of these technologies may be changing.

Volume growth was most pronounced for services related to the most common health problems of the elderly. For example, some coronary care services showed relatively high volume growth as follows: echography of the heart (10.8 percent); pacemaker insertion (8.9 percent); and cardiovascular stress tests (8.7 percent).

Some of the highest growth rates we found were for a minor-procedures category that includes primarily outpatient rehabilitation. Those rates included 17.6 percent for 1999 to 2001 and 14.3 percent for 2001 to 2002. This rapid growth occurred when spending caps for outpatient rehabilitation were temporarily lifted. Under the Balanced Budget Refinement Act of 1999, a moratorium on the spending caps was implemented in 2000. The moratorium was later extended through 2002, and CMS recently announced a delay until July 2003 for ending the moratorium.

Volume decreased for some services. For example, the volume of two types of cardiology services—coronary angioplasty and heart imaging, including cardiac catheterization—went down slightly, by 1.2 percent and 0.4 percent, respectively. Given the rapid growth in use of these services that had occurred previously, such small decreases may not signal a change in access to care for Medicare beneficiaries. Reasons for some of the other volume decreases—office visits by new patients, coronary artery bypass grafts, cystoscopy, hip fracture repair, and colectomy—are unclear. In some cases, volume decreases may be the result of the substitution of one service for another. The decrease in the volume of coronary artery bypass grafts, for example, may be due to greater use of coronary angioplasty, which is a newer procedure for treatment of coronary artery disease.

11 This is the same measure we used in MedPAC's June 2001 Report to the Congress on Medicare in rural America (MedPAC 2001).

12 The analysis is based on data for the first six months of each year. Growth rates calculated with these data may differ from growth rates based on full-year data because of seasonal variation in use of services.

**TABLE  
2B-2****Change in per capita use of physician services by beneficiaries in traditional Medicare, by selected type of service, 1999–2002**

Type of service	Per capita service use						Percent of total service use
	1999	2000	2001	2002	Average annual percent change		
					1999–2001	2001–2002	
All services	663.4	691.8	707.9	738.5	3.3%	4.3%	100.0%
Evaluation and management	353.6	359.4	361.9	372.5	1.2	2.9	50.4
Office visits—established patient	127.6	131.2	130.3	133.3	1.1	2.3	18.1
Hospital visit—subsequent	65.0	64.6	64.7	66.7	−0.2	3.1	9.0
Consultations	39.8	41.5	42.6	44.5	3.5	4.4	6.0
Emergency room visit	18.1	19.0	20.1	21.4	5.3	6.5	2.9
Specialist—psychiatry	18.5	18.3	18.2	18.5	−1.0	2.1	2.5
Specialist—ophthalmology	15.9	16.8	17.5	18.1	4.9	3.5	2.4
Hospital visit—initial	17.6	17.4	17.2	17.2	−1.2	0.3	2.3
Office visits—new patient	15.4	15.5	14.9	14.9	−1.4	−0.2	2.0
Imaging	81.1	88.2	96.1	105.1	8.9	9.4	14.2
Echography—heart	12.6	13.8	14.9	16.5	8.8	10.8	2.2
Standard—nuclear medicine	10.0	11.7	13.6	15.4	16.5	13.0	2.1
Advanced—CAT: other	9.3	10.7	12.3	14.1	14.8	15.3	1.9
Advanced—MRI: other	6.4	7.9	9.4	10.9	21.3	15.9	1.5
Standard—musculoskeletal	8.5	8.8	9.2	9.5	3.9	2.9	1.3
Advanced—MRI: brain	5.1	5.8	6.5	7.4	12.6	14.6	1.0
Standard—chest	6.7	6.5	6.3	6.3	−3.3	0.4	0.9
Advanced—CAT: head	2.7	2.8	2.9	3.0	3.2	4.5	0.4
Imaging/procedure—heart, including cardiac catheterization	1.9	2.1	2.4	2.4	10.4	−0.4	0.3
Procedures	200.3	214.5	218.5	226.1	4.5	3.5	30.6
Minor—other, including outpatient rehabilitation	14.7	18.9	20.4	23.3	17.6	14.3	3.2
Eye—cataract removal/lens insertion	16.0	16.1	15.6	15.8	−1.3	1.3	2.1
Endoscopy—colonoscopy	7.6	8.3	9.0	9.9	8.4	10.1	1.3
Major, cardiovascular—coronary artery bypass graft	6.7	6.7	6.1	5.6	−4.7	−7.0	0.8
Endoscopy—upper gastrointestinal	4.7	4.9	4.9	5.0	1.8	2.7	0.7
Major, orthopedic—knee replacement	3.9	4.0	4.2	4.6	4.2	9.9	0.6
Major, cardiovascular—coronary angioplasty	3.9	4.2	4.6	4.6	9.0	−1.2	0.6
Endoscopy—cystoscopy	3.8	3.8	3.8	3.7	0.0	−3.1	0.5
Eye—treatment of retinal lesions	3.5	3.7	3.5	3.6	0.9	2.6	0.5
Major, orthopedic—hip fracture repair	3.6	3.6	3.5	3.2	−1.9	−9.5	0.4
Major, orthopedic—hip replacement	2.7	2.8	2.8	2.9	1.8	3.1	0.4
Major, cardiovascular—pacemaker insertion	1.7	1.9	2.1	2.2	8.6	8.9	0.3
Tests	22.0	22.6	23.7	25.9	3.9	9.0	3.5
Other—electrocardiograms	6.5	6.5	6.4	6.6	−0.6	1.9	0.9
Other—cardiovascular stress tests	3.3	3.6	3.9	4.2	8.8	8.7	0.6
Lab tests—other (physician fee schedule)	1.9	2.1	2.4	2.9	12.9	22.1	0.4
Other—electrocardiogram monitoring	1.9	1.9	1.9	2.0	0.2	6.0	0.3

Note: CAT (computerized automated tomography), MRI (magnetic resonance imaging). Service use is measured as the relative weights (relative value units) for services received multiplied by the physician fee schedule conversion factor. To put service use in each year on a common scale, we used the relative weights and conversion factor for 2002. For billing codes not used in 2002, we imputed relative weights based on the average change in weights for each type of service.

Source: MedPAC analysis of claims for a 5 percent random sample of Medicare beneficiaries from the first six months of each year.

It should be emphasized that further analysis is required to understand the factors underlying volume growth. MedPAC is currently conducting research on this issue.

## Accounting for cost changes in the coming year

In order to determine the appropriate payment update for 2004, we must estimate how much costs will change in the coming year. Two factors are expected to affect the cost of physician services during the coming year: input price inflation and productivity growth. Productivity growth is expected to reduce costs through capital investment, changes in work processes, and other factors.

It is possible that other factors, including some scientific and technological advances, may increase costs. Features of the physician fee schedule should account for those cost increases, at least partially, however. Every year, new billing codes are created and existing codes are revised. Also, by law, the fee schedule's relative weights are reviewed and recalibrated every five years.

## Measuring input price inflation

The Medicare Economic Index (MEI) is used as the generally accepted measure of input price inflation for physician services. It is calculated by CMS as a weighted average of price changes for inputs used to provide physician services (Table 2B-3). Those inputs include physician time and effort, or work, practice expense, and professional liability insurance (PLI). Practice expense includes nonphysician employee compensation, office expense, medical materials and supplies, medical equipment, and other professional expenses, such as private transportation. In general, the weights

**TABLE  
2B-3**

## Medicare Economic Index weights and forecast of input price changes for 2004

Input	Weight (percent)		Price changes for 2004 (percent)
	Category	Total	
Total		100.0%	3.4%
Physician work		54.5	3.4
Wages and salaries	44.2%		3.4
Nonwage compensation	10.3		3.5
Practice expense		42.3	3.1
Nonphysician employee compensation	16.8		3.7
Wages and salaries	12.4		3.7
Nonwage compensation	4.4		3.6
Office expense	11.6		3.0
Medical materials and supplies	4.5		2.3
Medical equipment	1.9		1.7
Other professional expense	7.6		2.7
Professional car	1.3		1.8
Other	6.3		2.9
Professional liability insurance		3.2	5.6

Note: Numbers may not total exactly because of rounding.

Source: MedPAC analysis of unpublished data from CMS.

used to construct the MEI represent the shares of physicians' practice revenues attributable to each input, based primarily on a survey conducted by the AMA for 1996. Physician work has a weight of 54.5 percent, practice expense has a weight of 42.3 percent, and PLI has a weight of 3.2 percent. CMS revises these weights and the other components of the MEI periodically (see text box, p. 80).

CMS currently projects that input prices for physician work will increase 3.4 percent in 2004, based on increases of 3.4 percent in wages and salaries and 3.5 percent in nonwage compensation. Practice expenses are projected to increase by 3.1 percent. This projection includes a 3.7 percent increase in nonphysician employee compensation and a 3.0 percent increase in office expenses.

The largest change expected in input prices is for PLI, which is projected to

increase by 5.6 percent. Historically, this component of the MEI has followed a cyclical pattern, illustrated by the changes in PLI premiums from 1990 to 2002 (Figure 2B-3, p. 80).<sup>13</sup> The recent increase in PLI premiums in 2002, estimated at 11.3 percent, was the highest in over a decade.

In sum, the index shows that input prices for physician services are expected to increase by 3.4 percent in 2004.

## Productivity growth

Productivity growth is the ratio of growth in outputs to growth in inputs. Measuring productivity growth requires detailed information on the personnel, facilities, and other inputs used and on the quantity, quality, and mix of services (outputs) produced. Because such data are generally not available, MedPAC has adopted a policy standard or goal for achievable

<sup>13</sup> Despite the changes in PLI premiums, the premiums have not varied much as a percentage of physician revenues. From 1990 through 1998, PLI premiums remained in a narrow range, from 3 to 5 percent of revenues (Gonzalez and Zhang 1998, Zhang and Thran 1999, and Wassenaar and Thran 2001).

## Revising the Medicare Economic Index

CMS revises the Medicare Economic Index (MEI) periodically so that the index's weights and other components reflect current conditions. A revision occurred most recently in 1998 based on data primarily for 1996. Previous to that revision, the agency revised the MEI in 1992 with data for 1989.

So far, the primary data source for the weights in the MEI has been the American Medical Association's Socioeconomic Monitoring System (SMS) survey. The weights for the major categories of inputs considered in the MEI—physician work, practice expense, and professional liability insurance—have all come from the SMS survey. The SMS survey has also been the source of the weights for

subcategories of practice expense: nonphysician employee compensation, office expense, medical materials and supplies, medical equipment, and other professional expense. Within these subcategories, CMS has assigned weights to inputs with data from other sources, including the Employment Cost Index of the Bureau of Labor Statistics, the Asset and Expenditure Survey of the Bureau of the Census, and the Current Population Survey of the Bureau of the Census.

For the next revision of the MEI, it will be necessary for CMS to substitute another data source for the SMS survey because the AMA discontinued the SMS survey after it was conducted last, in 1999. ■

productivity growth that is based on growth in multifactor productivity in the national economy.<sup>14</sup>

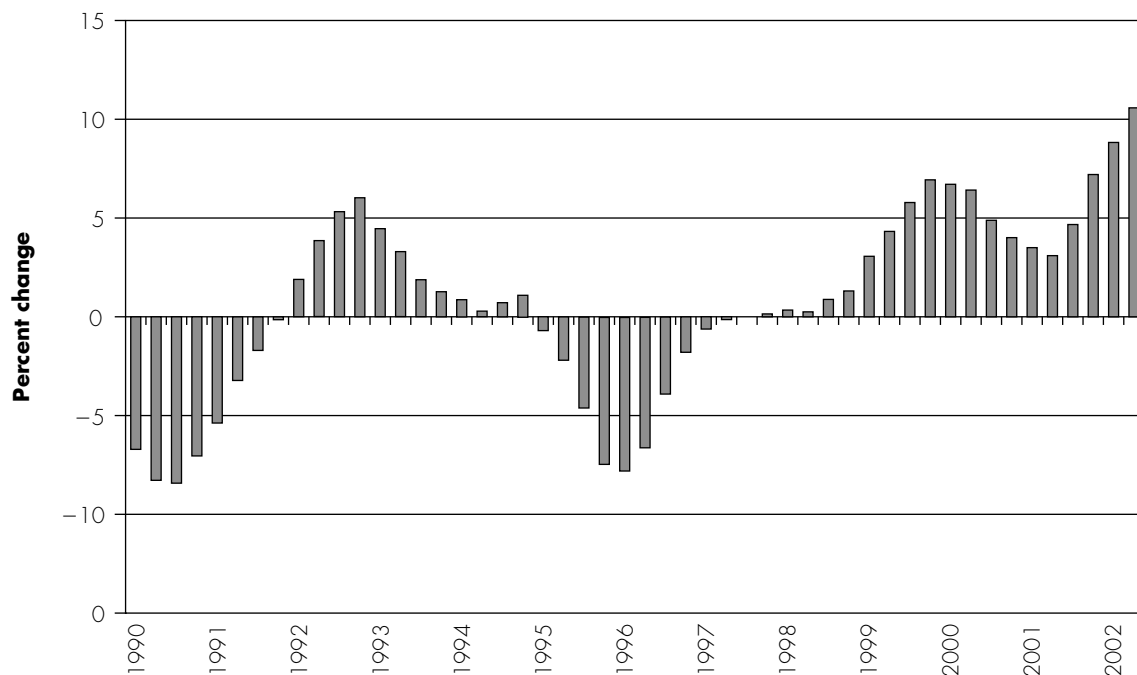
Using the current estimate of growth in multifactor productivity from the Bureau of Labor Statistics, the productivity adjustment would be 0.9 percent.

## Update recommendation

Under MedPAC's payment update framework, updates can include three components: an adjustment for payment adequacy, if appropriate; an estimate of inflation in input prices; and a downward adjustment in the update for productivity growth.

**FIGURE 2B-3**

**Quarterly changes in professional liability insurance premiums, 1990–2002**



Source: Unpublished CMS data.

<sup>14</sup> Multifactor productivity is based on all relevant inputs used to provide goods and services. These inputs include labor, capital, and other inputs, such as energy and materials.

## RECOMMENDATION 2B

**The Congress should update payments for physician services by the projected change in input prices, less an adjustment for productivity growth of 0.9 percent, for 2004.**

Payments are adequate if there is a modest positive update in 2003. If the Congress does not change current law and prevent a payment reduction in 2003, however, payments may not be adequate, and a compensating adjustment in payments may be necessary in 2004. The other components of the update are the

projected change in input prices, which is 3.4 percent, and an adjustment for productivity growth, which is 0.9 percent. The net of these two components is an update of 2.5 percent.

## IMPLICATIONS 2B:

### Spending

- This recommendation would update physician payments more than under current law. It is expected to increase costs by more than \$1.5 billion in 2004.

### Beneficiary and provider

- Increasing payments for physician services would help preserve beneficiary access to care.
- Increasing payments to physicians would help to maintain the adequacy of those payments and allow physicians to furnish high-quality services. ■

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